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selecting at the controller a new IP multicast address and port number and a decryption key for a second IP multicast session;

sending the new IP multicast address and port number and the decryption key to the translator/decryption module;

creating with the controller a new repair/encryption module and providing the new repair/encryption module with the new IP multicast address and port number and the encryption key;

monitoring received ones of the packets to the recipient in the first session with the repair server;

buffering portions of the packets from the first session at a retransmit server in the network; and

detecting missing packets in said repair server and in response to said subscriber request, requesting missing packets from said retransmit server.

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14. (Amended) A system for repairing multicast packets in a network including a source of multicast packets in a multicast session and a plurality of multicast recipients in that session, comprising:

a controller in a repair server for receiving and forwarding a request from a recipient to join a first IP multicast session;

a subscription server receiving the request from the controller to determine if said recipient has subscribed to a repair service;

said controller receiving a positive response from the subscription server and determining whether a repair/encryption module exists in the repair server for the first multicast session;

said controller generating a new IP multicast address and port number and a decryption key for a second IP multicast session;

said controller sending the new IP multicast address and port number and the decryption key to a translator/decryption module;

a new repair/encryption module created by the controller, said controller providing thereto the new repair/encryption module with the new IP multicast address and port number and an encryption key;



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said repair server monitoring received ones of the packets to the recipient in the first session;

a retransmit server in the network buffering portions of the packets from the first session; and

said repair server detecting missing packets and in response to a subscriber request, requesting missing packets from said retransmit server.

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12. (Amended) The system of claim 11, which further comprises:

said repair server reading packets from said first IP multicast session and checking if there are any missing packets and requesting said retransmit server to obtain the missing packets;

said repair/encryption module encrypting packets and writing them to the second IP multicast session;

an IP stack in a receiver processing the packets for the second IP multicast session and sending the processed packets to the translator/decryption module;

said translator/decryption module decrypting the packets and modifying a destination IP address and port number from values for the second session to values for the first session and sending the packets to the recipient;

whereby the recipient may request that a multicast session be repaired without interrupting any applications that are already executing in the receiver.



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